



# Protecting Your Property From Flooding

FEDERAL EMERGENCY MANAGEMENT AGENCY

## ARE YOU AT RISK?

If you aren't sure whether your house is at risk from flooding, check with your local floodplain manager, building official, city engineer, or planning and zoning administrator. They can tell you whether you are in a flood hazard area. Also, they usually can tell you how to protect yourself and your house and property from flooding.

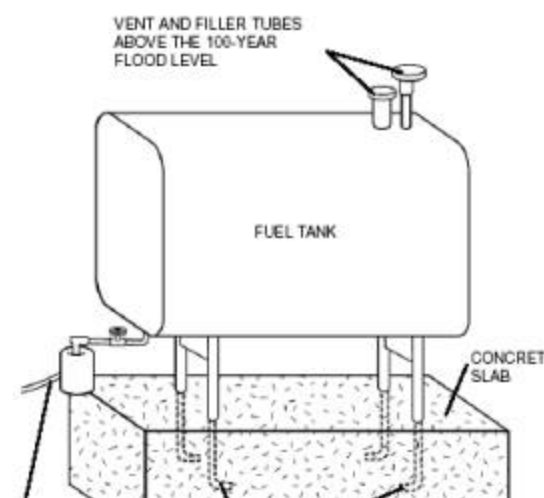
## WHAT YOU CAN DO

Flood protection can involve a variety of changes to your house and property – changes that can vary in complexity and cost. You may be able to make some types of changes yourself. But complicated or large-scale changes and those that affect the structure of your house or its electrical wiring and plumbing should be carried out only by a professional contractor licensed to work in your state, county, or city. One example of flood protection is anchoring fuel tanks. This is something that skilled homeowners can probably do on their own.

## ANCHOR FUEL TANKS

Unanchored fuel tanks can be easily moved by floodwaters. These tanks pose serious threats not only to you, your family, and your house, but also to public safety and the environment. An unanchored tank outside your house can be driven into your walls by floodwaters, and it can be swept downstream, where it can damage other houses. When an unanchored tank in your basement is moved by floodwaters, the supply line can tear free and your basement can be contaminated by oil. Even a buried tank can be pushed to the surface by the buoyant effect of soil saturated by water.

As shown in the figure, one way to anchor a tank is to attach it to a large concrete slab whose weight is great enough to resist the force of floodwaters. This method can be used for all tanks, both inside and outside your house. You can also anchor an outside tank by running straps over it and attaching them to ground anchors.



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## Anchor Fuel Tanks

### TIPS

Keep these points in mind when you anchor a fuel tank:

If you prefer not to do this work yourself, you can have a handyman or contractor anchor your tank.

Extend all filling and ventilation tubes above the 100-year flood level so that flood waters cannot enter the tank.

Close all connections when flood warnings are issued.

### ESTIMATED COST

Anchoring a 1,000-gallon fuel tank to a concrete base will cost about \$300 to \$500. Using straps and ground anchors will cost about \$300.

### OTHER SOURCES OF INFORMATION

*Protecting Your Home from Flooding*, FEMA, 1994

*Repairing Your Flooded Home*, FEMA-234, 1992

*Flood Emergency and Residential Repair Handbook*, FIA-13, 1986

*Retrofitting Flood-Prone Residential Structures*, FEMA-114, 1986

To obtain copies of these and other FEMA documents, call FEMA Publications at 1-800-480-2520. Information is also available on the World Wide Web at <http://www.fema.gov>.